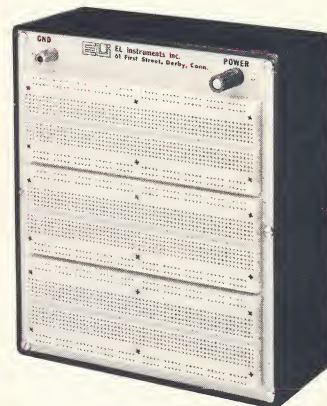
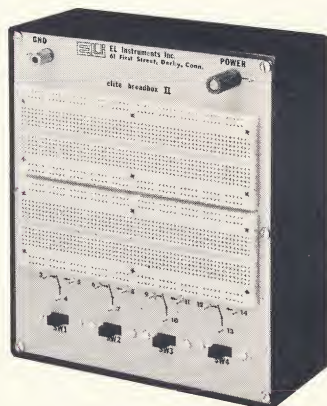
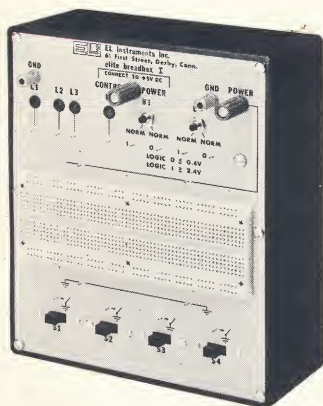


★
FEB 72

SIMPLY PLUG-IN YOUR COMPONENTS... AND YOU BUILD YOUR OWN READY-TO-USE CIRCUITS...

Here are three (3) ready-to-use Breadboxes, component interconnections are made with common No. 22-26 solid hook-up wire. Needs no special patch cords... and never needs soldering. Now, how easy can you get?



BREADBOX 1 \$65.

- One (1) SK-10 EL SOCKET (will take up to (8) 14 pin dip modules)
- Two (2) 5 Way Binding Post (Ground)
- One (1) 5 Way Binding Post (External Power Input)
- One (1) 5 Way Binding Post (Lamp driver and Bounce-Free Push-button Power Input) (5 volts @ 250 Ma Max.)
- Four (4) Display Lamps with Built-in Driver Circuits. (Lamp On 1.5 volts)
- Two (2) Bounce Free Pushbuttons with both Normal and Complimentary Outputs. (Logic Zero <5V) (Logic One >2.4V) T2L Compatible
- Four (4) SPST Switches — Wiper Permanently grounded.

BREADBOX 2 \$65.

- Two (2) SK-10 EL SOCKETS (will take up to (16) 14 pin dip modules)
- One (1) 5 Way Binding Post (External Power Input)
- One (1) 5 Way Binding Post (Ground)
- Four (4) SPDT Switches

Prices and specifications subject to change without notice.

TERMS: Net 30

F.O.B.: Derby, Connecticut 06418

DELIVERY: Less than 30 days A.R.O.

EL INSTRUMENTS, INCORPORATED
61 First Street/Derby, Conn. 06418/(203) 735-8774

BREADBOX

\$65.^{EA}

BREADBOX 3 \$65.

- Three (3) SK-10 EL SOCKETS (Will take up to (24) 14 pin dip Modules)
- One (1) 5 Way Binding Post (External Power Input)
- One (1) 5 Way Binding Post (Ground)

On each Breadbox, all Interconnections Between SK-10, Lamp Drivers, Switches and Pushbuttons are Accomplished by Standard No. 22 Gauge Solid Hook-up Wire.



OUR PHENOMENAL UNIVERSAL COMPONENT

EL SOCKET®

• NO SOLDERING — JUST PLUG IN

Unique design will accommodate wide range of wire or component leads, from 0.15 to .032 inches.

Exclusive mounting feature enables you to mount unit with common No. 4 screws.

Specially designed terminals creates exceptionally low contact resistance.

Designed specifically for ease of insertion of multi-pin components.

Vertical as well as horizontal interconnecting matrices.

Connect more wire, wider fan-out capabilities.

Maintains initial contact characteristics beyond 10,000 insertions.



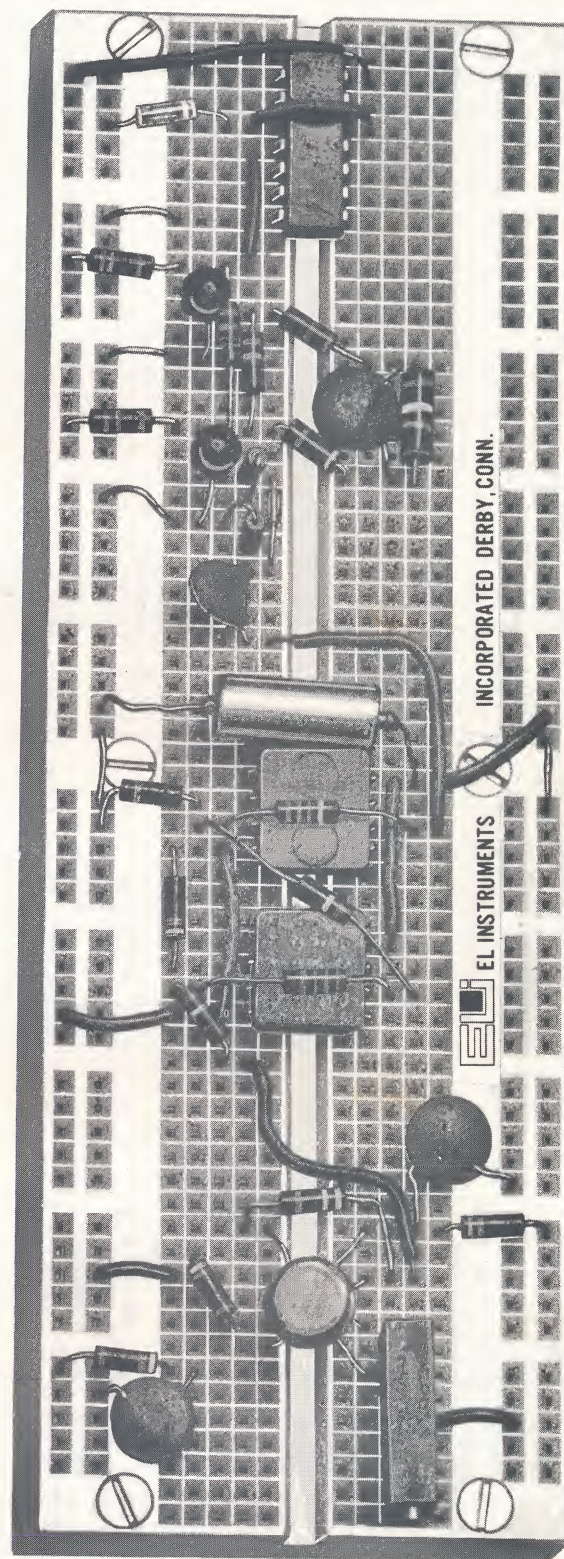
EL INSTRUMENTS INCORPORATED

61 First Street • Derby, Connecticut 06418 • Phone (203) 735-8774

... has created and produced the ultimate answer to ease in breadboarding circuits!

Each EL SOCKET® is ready to use. No. 4 mounting screws are all that is needed. Can even be insulated for use on conducting or metal surfaces by using vinyl tape. You build your circuit by plugging the components (i.e., 1/4 watt resistors, ceramic capacitors, diodes, transistors, I.C.'s, etc.) into the EL SOCKET®. The components are interconnected with any solid wire #22 — #26 gauge. No special patch cords required.

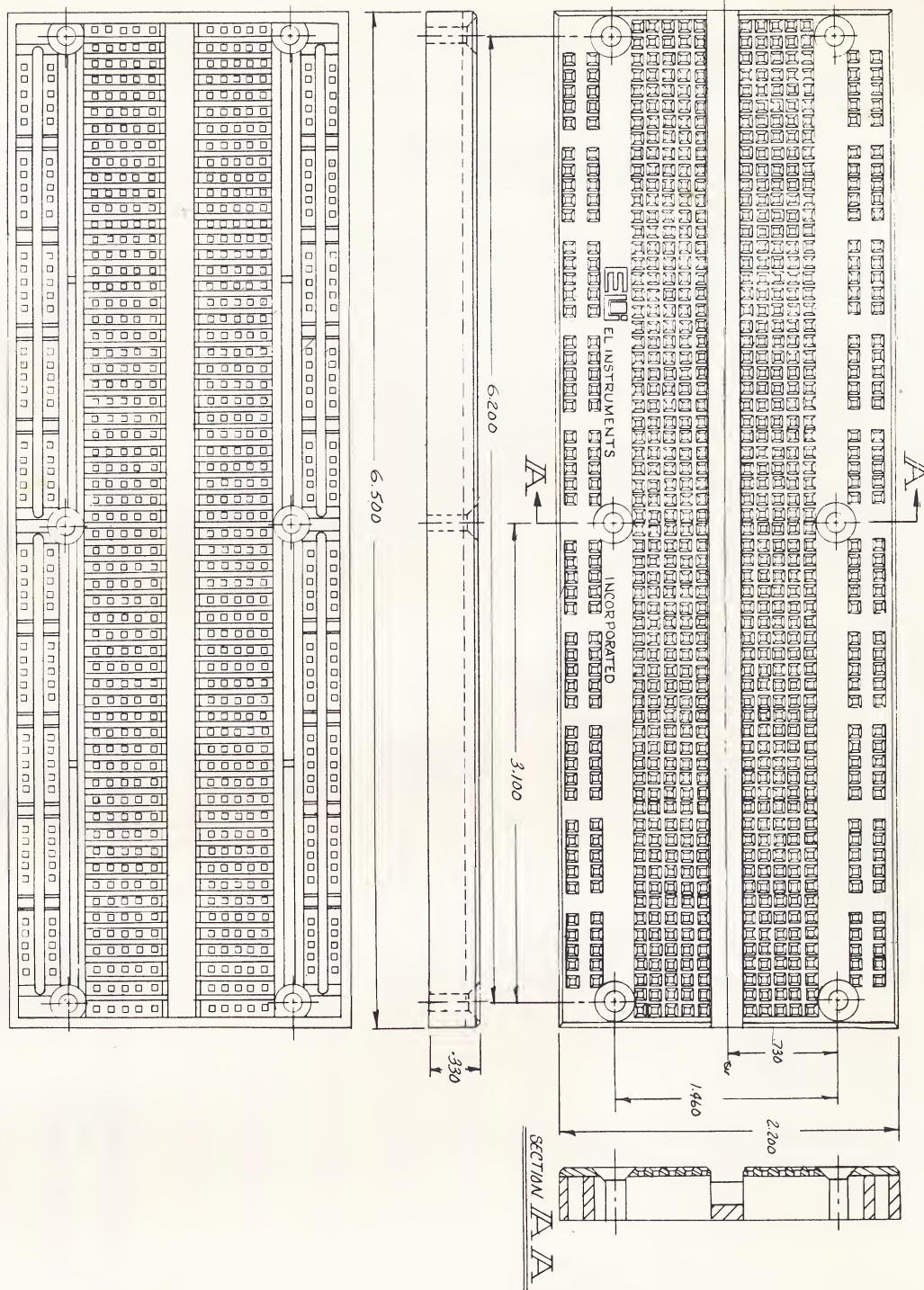
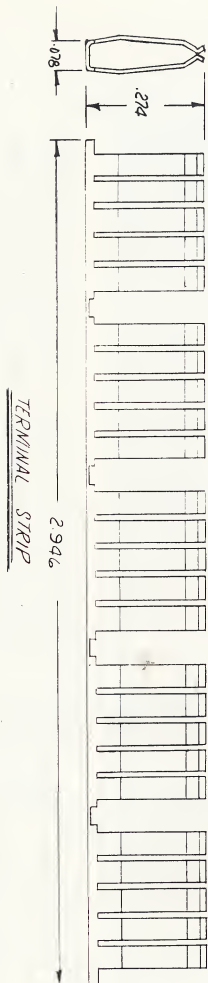
Each terminal has five tie points: one point for component lead, three points for input and output wires, one point for test probe. New plug-in tie point contacts were developed for these breadboard strips to produce no-solder holding power and solid electrical contact. The resulting grip on inserted pins and leads is unequaled, exceeding conventional spring sockets. Contacts are spring loaded beryllium copper, heat-treated and nickel plated.



El Socket® Part No. SK-10
only

(Quantity Discounts Available)

\$17.25



- Precision molded high impact plastic housing.
- Non corrosive, high tensile strength contacts.
- Accepts wire gauges from #22 to #26 and maintains minimum contact resistance over the range.
- Expected contact life over 10,000 insertions.
- Signal Circuit frequencies in excess of 30 MHz can be accommodated.



EL Instruments Incorporated

61 First Street, Derby, Conn. 06418 ■ Phone 203/735-8774

AREA REPRESENTATIVE:

Pulse Generator PG-1

The Model PG-1 is a digital signal source ideal for development research and educational applications.

only **\$150.**



EL INSTRUMENTS INC.

61 FIRST STREET

DERBY, CONNECTICUT 06418

PHONE (203) 735-8774

Its wide frequency and pulse width ranges, 1 Hz to 1 MHz and 100 nanoseconds to 100 milliseconds; low output impedance, 50 ohms; and fast rise and fall time, less than 20 nanoseconds, insures the PG-1's compatibility with RTL, DTL and TTL integrated circuit modules as well as standard discrete component circuits. Maintenance and calibration procedures are all but eliminated in the PG-1 by the extensive use of high speed linear and digital integrated circuits and modern packaging techniques.

Mechanically, the PG-1 is rugged, long lasting and capable of withstanding the harsh handling typical of both industrial and educational laboratories. The PG-1 combines time proven circuit concepts with modern IC technology, high-quality materials and extreme care in workmanship, resulting in a rugged and reliable electronic instrument.

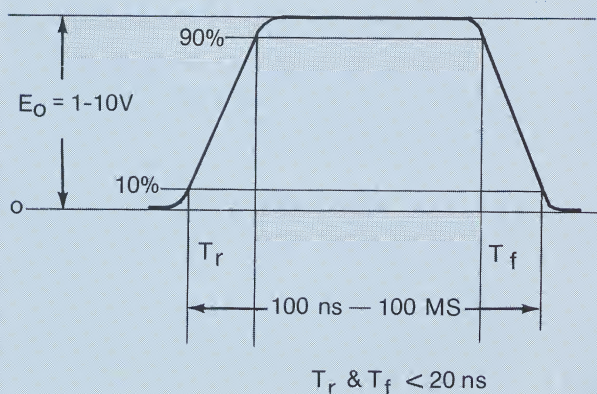
The ELite Pulse Generator Model PG-1 comes in a compact, handsome, shock-proof steel case and will afford many years of trouble-free dependable service.

- 1 Hz to 1 MHz Frequency Range.
- Rise and Fall Time less than 20 NS.
- 100 NS to 100 MS Pulse Width Range.
- Continuous amplitude adjustment of both High and Low Output Levels. .

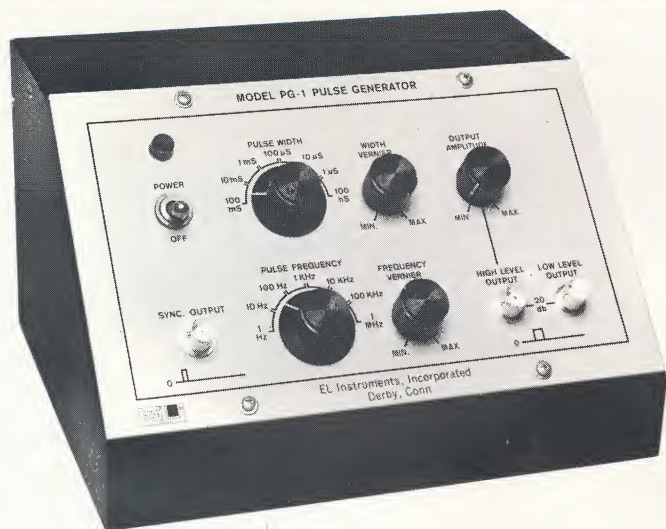
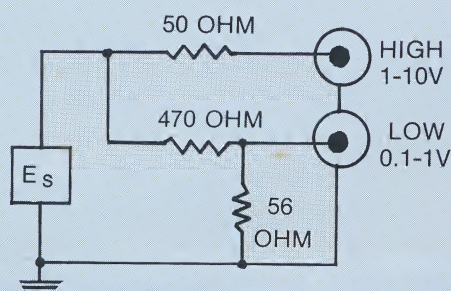
- Short circuit proof.
- Separate sync output pulse.
- No more calibration & maintenance due to modern design with linear IC's.
- Low cost.
- Sloping panel construction to ease operation.

Add a pulser to your ELite 3.

PULSE CHARACTERISTICS



OUTPUT CHARACTERISTICS



TERMS: Net 30
F.O.B. Derby, Connecticut 06418
DELIVERY: Less Than 30 days A.R.O.



EL INSTRUMENTS INC.
61 FIRST STREET DERBY, CONNECTICUT 06418
PHONE (203) 735-8774

AREA REPRESENTATIVE:

PULSE CHARACTERISTICS

AMPLITUDE — 10 Volt Maximum into open circuit 5 Volt Maximum into 50 ohms. Separate output BNC connectors provide High (1-10 volt) and Low (0.1-1 volt) positive pulses. A Single Turn vernier control provides continuous amplitude adjustment of both output pulses: High and Low Level Outputs are *SHORT CIRCUIT PROOF*.

OUTPUT IMPEDANCE — 50 ohms.

WIDTH — 100 nanosec. to 100 ms in six overlapping decades steps. Single turn vernier control provides continuous width adjustment between ranges.

DUTY CYCLE — Greater than 60% at any Frequency Setting.

PULSE POSITION — (With respect to sync output) Minimum delay 20 nanosec. Typical delay 40 nanosec.

WIDTH JITTER — Less than 0.1% of any pulse width setting.

FREQUENCY CHARACTERISTICS

RANGE — 1 Hz to 1 MHz in six overlapping decade steps. A single turn vernier control provides continuous frequency adjustment between ranges.

JITTER — Period jitter in any frequency range is less than 0.1% of the maximum frequency setting for the selected range.

STABILITY

(Pulse and Frequency) Under constant ambient temperature conditions stability for an 8 hour period following a ½ hour warm up and $\pm 10\%$ line variation — better than 1%.

SYNC-OUTPUT

Sync pulse leads main output pulse by a minimum of 20 nanosec.

(Typical Lead Time — 40 nanosec.)

Amplitude — 10 volts

Rise and Fall Time — Less than 50 nanosec.

Width — 150 ± 50 nanosec.

Output Impedance — 600 ohms

POWER

105-125 Volts AC — 50/60 Hz.

5 Watts — 220 volts AC Operation Available.

PHYSICAL

Bench Top * Sloped Panel Case

Maximum Height — 6 inches

Width — 8½ inches

Depth — 6½ inches

Weight — 3 lbs. net

*Rack Mounting Hardware Available.

Specifications are valid at $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ with 105 to 125 VAC. or 200 to 250 VAC. Line voltage. Prices and specifications subject to change without notice. Warranty: one year.

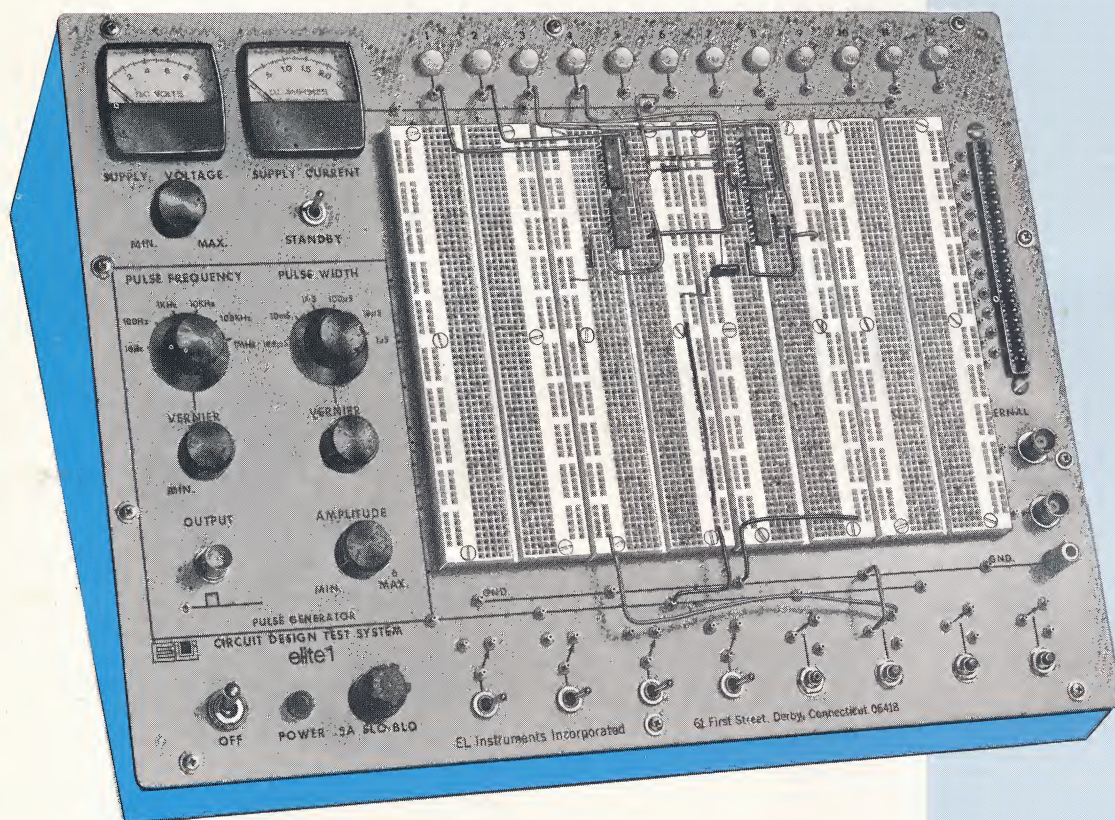
"The Dynamic Breadboard"

elite1

CIRCUIT DESIGN TEST SYSTEM

The Elite 1 is a complete advance concept circuit design test system, developed to provide engineering with a versatile instrument for circuit designing, layout, testing and construction with any combination of components and modules.

only \$650.



EL INSTRUMENTS INC.
61 FIRST STREET
DERBY, CONNECTICUT 06418
PHONE (203) 735-8774

Are you tired of jury-rigged bench set-ups each time you try out a circuit idea? Such lash-ups can get messy, with coax cables and power supply leads in all directions. You can rid yourself of this clutter with a new desk-top instrument that contains everything you need to assemble and test your circuit and logic designs. Put together input-output simulators, test pattern generators, temporary interface assemblies — fast.

The Elite 1 has four built-in phenomenal SK-10 Universal Component Sockets that hold 32 14-pin, 28 16-pin, or 20 24-pin dip packages. Of course, you can mix module sizes. Naturally, the Elite 1 can accommodate T0-5 devices and discrete components of all types.

To connect these devices together as a circuit, you use ordinary 22 gauge solid hook-up wire. The wire is gripped by pin jacks on the panel or the SK-10. You needn't worry about running short of, or losing, special patch cords. You don't need special patch cords — just standard #22 solid hook-up wire.

- Built-in wide range pulse generator (short circuit proof).
- Built-in variable power supply (short circuit proof).
- Built-in independent circuit monitor logic lights.
- Built-in isolated pushbuttons and toggle switch array.
- Universal component acceptance with our phenomenal EL Socket SK-10.
- Unlimited fan in/fan out capability.
- Common hook-up wire interconnections.

- No more rats nest and shorted leads.
- No more cold solder joints.
- No more component failures due to soldering irons (and solder splashes).
- No more archaic breadboards.

Self-contained Logic Design/Test System takes the mess out of design. EL Instruments' Elite 1 puts you in the Apollo Age!

To insure dependability, extreme care of design and workmanship have gone into the time-proven circuitry of the Elite 1. This compact instrument is human engineered for optimum circuit construction. The Elite 1 enables the user to design and test new circuits both quickly and efficiently.

The compact, self-contained Elite 1 incorporates a unique combination of our "Phenomenal EL Socket, the SK-10", a wide range precision pulse generator, an extremely stable variable power supply, a random entry display of independently circuited logic lites, and various switches, jacks and connectors.

This system accommodates a wide variety and considerable number of integrated circuits and discrete components, providing the engineer with a flexible and versatile instrument to design, lay-out, test and construct circuits.

Many advantages and short-cuts are made available with the Elite 1, such as, the low frequency pulse range (1-10 Hz) combined with the logic lites for direct, inter-circuit signal analysis, as well as, universal components sockets (SK-10) and isolated switches for internal circuit control.

In addition to versatility, economy and ease of operation were basic parameters in the design of the Elite 1. The 75 closed entry pin jacks and 4 Universal Component SK-10 Sockets® are strategically located for maximum access and flexibility, and minimum interconnection lead lengths. Concerning economy, all jacks and terminal strips accept common #22 gauge hook-up wire for fast, efficient component interconnections.

The Elite 1 combines time-proven circuitry, high quality materials and extreme care of workmanship, resulting in a rugged and reliable electronic instrument. All circuits were carefully designed and constructed for dependable and continuous performance. The built-in variable power supply, as well as the pulse generator, are both short circuit proof. This system comes in a handsome, desk-top, shock proof cabinet and will afford many years of trouble-free dependable service.

Specifications are valid at 25°C ±5°C with 105 to 125 VAC. or 200 to 250 VAC. Line voltage. Prices and specifications subject to change without notice. Warranty: one year.

TERMS: Net 30

F.O.B. Derby, Connecticut 06418

DELIVERY: Less Than 30 days A.R.O.



EL INSTRUMENTS INC.
61 FIRST STREET DERBY, CONNECTICUT 06418
PHONE (203) 735-8774

AREA REPRESENTATIVE:

SPECIFICATIONS

COMPONENT CAPABILITY — The ELITE 1 will accommodate all Integrated Circuits (Logic, Linear, Hybrid, MSI, MOS, etc.) in TO-5 and Dual In-Line Packages with any mixed package sizes (14, 16, 24, 36 pins, etc.) It will also accommodate Transistors, Resistors, Capacitors, and Diodes.

COMPONENT CAPACITY — Typically, this system will accommodate from twenty (20) 24-pin DIP's up to thirty-two (32) 14-pin DIP's or the equivalent mixed package sizes, TO-5 IC's or discrete components.

CIRCUIT CONNECTORS — The following closed entry pin jacks are provided to accept standard No. 22 gauge hook-up wire, for maximum and economic interconnection capability:

- | | |
|---------------------|--------------------------------|
| (5) Power Supply | (12) Display |
| (5) Ground | (24) Switches and Push Buttons |
| (5) Pulse Generator | (24) External Connectors |

RANDOM ENTRY DISPLAY — Twelve (12) independent indicator lamps are provided with direct access, to test and display, conditions of the circuitry under construction. The lamps will operate under the following conditions:

- | | |
|-----------------|------------|
| Lamp ON | 1.5 volts |
| Lamp OFF | <0.5 volts |
| Input Impedance | 4.7K ohms |

ISOLATED SWITCH ARRAY — The following switches are provided for independent control of the circuitry under construction:

- | | |
|----------------------------|------------------------|
| (4) SPDT — Toggle Switches | (4) SPDT — Pushbuttons |
|----------------------------|------------------------|

INPUT/OUTPUT — Three (3) BNC Connectors and one (1) 22-pin PC Board Connector are provided for easy access to external equipment.

POWER SUPPLY

The ELITE 1 incorporates an extremely stable short circuit proof Variable Power Supply. A Volt Meter and Amp Meter are built in to readily determine power consumption of circuitry under construction.

- | | |
|------------------|--|
| Voltage Range | 2-10 Volts |
| Current Range | 0-2 Amps. |
| Controls | Single turn potentiometer and stand-by switch. |
| Load Regulation | Less than 0.1% from no load to full load at maximum output voltage. |
| Ripple and Noise | Less than 15 mv at maximum load and maximum output voltage. |
| Stability | Under constant ambient conditions total drift for 8 hours following 1/2 hour warm-up less than 1%. |
| Volt Meter | 0-10 volts DC (± 2%) |
| Amp Meter | 0-2 amps DC (± 2%) |

PULSE GENERATOR

A precision, Wide Range Pulse Generator is incorporated in the ELITE 1, with individual frequency, pulse width and amplitude controls.

- | | |
|-------------------|--|
| FREQUENCY: | |
| Range | 1 Hz to 1 MHz |
| Course Adjustment | Six position rotary switch: |
| | 1-10 Hz; 10-100 Hz; 0.1-1 KHz; |
| | 1-10 KHz; 10-100 KHz; 0.1-1 MHz. |

- | | |
|-----------------|--|
| Fine Adjustment | Single-turn potentiometer provides a 10 to 1 range determined by course setting. |
|-----------------|--|

- | | |
|--------------------|--|
| PULSEWIDTH: | |
| Range | 100 ns to 0.1 sec. |
| Course Adjustment | Six position rotary switch: |
| | 0.1-1 μ s; 1-10 μ s; 10-100 μ s; |
| | 0.1-1 ms; 1-10 ms; 10-100 ms. |

- | | |
|-----------------|--|
| Fine Adjustment | Single-turn potentiometer with a 10 to 1 range determined by course setting. |
|-----------------|--|

- | | |
|--------------------|--|
| OUTPUT: | |
| Rise and Fall Time | Less than 50 ns. |
| Amplitude | 1 to 6 volts positive, adjustable via single-turn potentiometer. |

- | | |
|------------------|---------------------|
| Output Impedance | Less than 100 ohms. |
|------------------|---------------------|

MISCELLANEOUS

CONSTRUCTION — Every element in this instrument is of high quality in both material and workmanship. The system is constructed in a rugged and compact 'desk-top' cabinet, and is completely SHORT CIRCUIT PROOF.

- | | |
|--------------------|---|
| Size: | 15" wide x 4 1/4" high x 11" deep (sloping front panel) |
| Weight | 10 pounds |
| Power Requirements | Standard — 60 watts, 110 VAC, 50/60 Hz |
| | Optional — 60 watts, 220 VAC, 50/60 Hz |



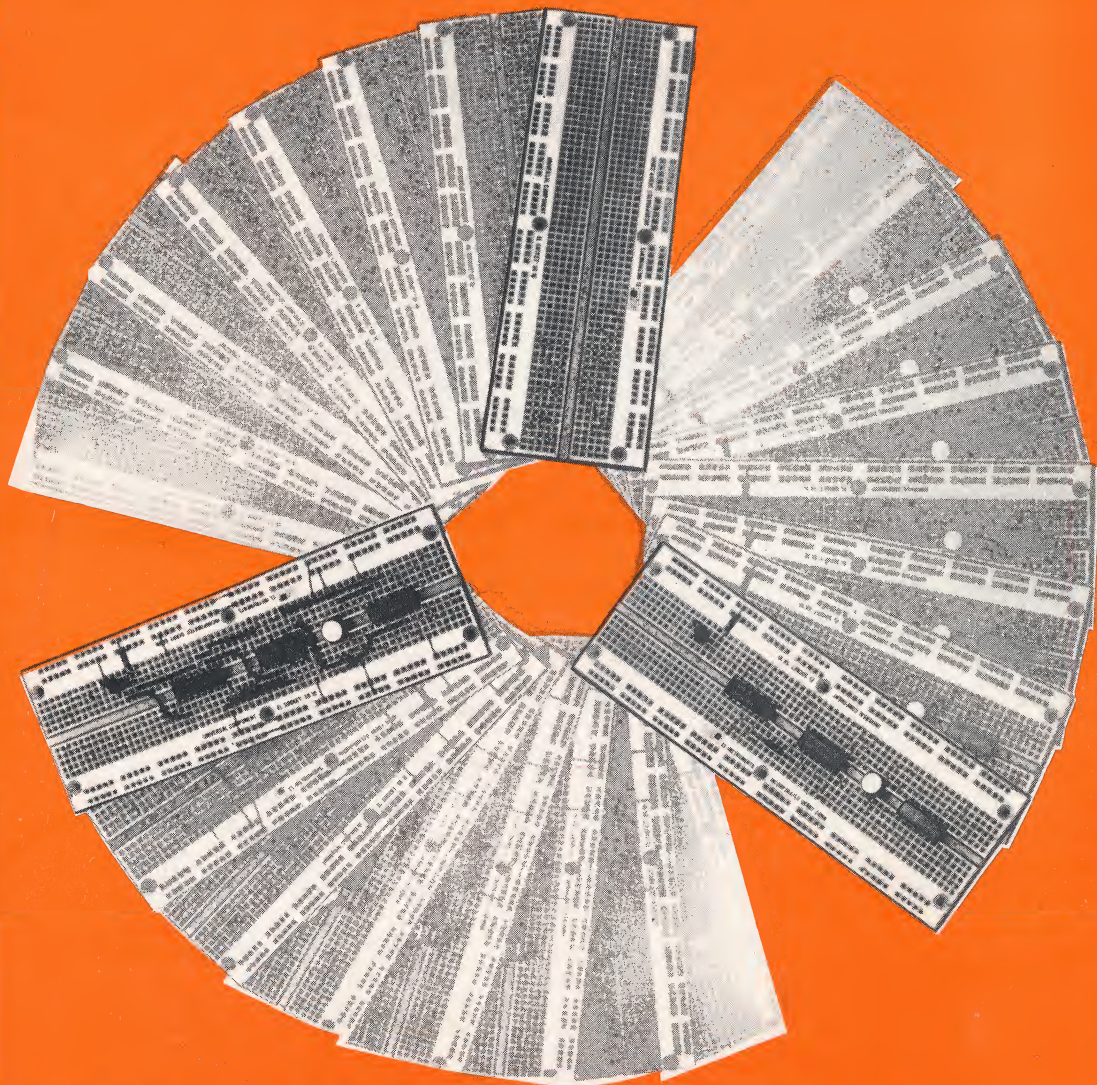
ALL PRICES EFFECTIVE 11/3/71.

ELI PRICE SHEET

ELITE 1	\$650.00	Dynamic Breadboard
ELITE 2	\$1300.00	" "
ELITE 3	\$350.00	Basic Breadboard
ELITE 3A	\$415.00	" "
ELITE 3B	\$450.00	" "
PG-1	\$150.00	Pulse Generator 1 MHz
PG-5	\$920.00	" " 50 MHz
FG-1A	\$290.00	Function Generator
FG-2	\$390.00	" "
1520	\$1200.00	Counter
B.B. I	\$65.00	Breadbox
B.B. II	\$65.00	"
B.B. III	\$65.00	"
SK-10	\$17.25*	Phenomenal EL Socket

*Quantity price sheet available on request.

Our Universal Component EL SOCKET®



MAKES BREADBOARDING CIRCUITS A PLEASURE . . .

JUST LOOK AT THESE ADVANTAGES WHEN YOU USE OUR **EL SOCKET®**

El Socket™

Part No. SK-10

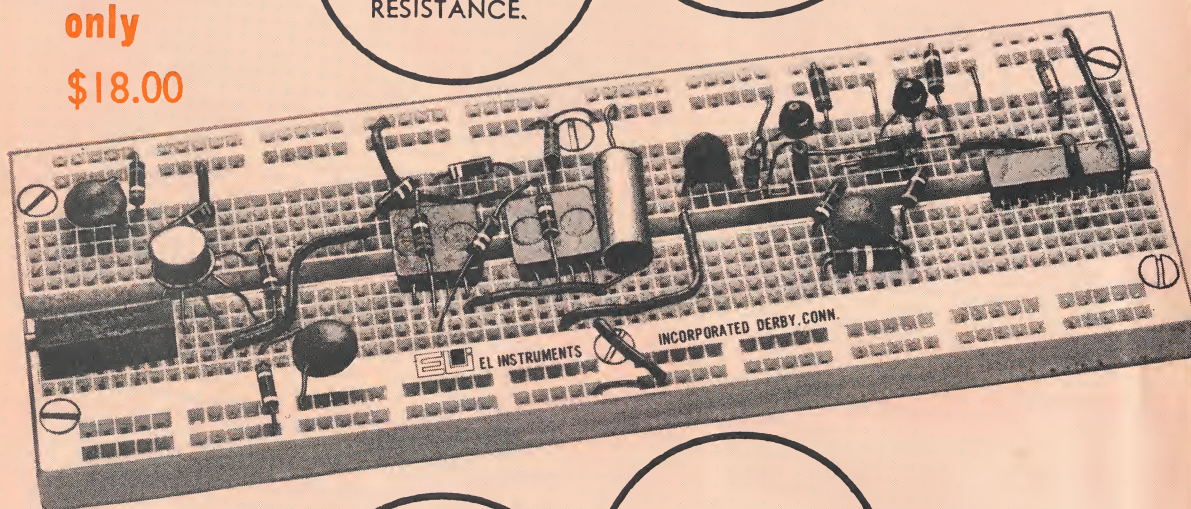
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TERMINALS CREATES
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RESISTANCE.

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SPECIFICALLY
FOR EASE OF
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MULTI-PIN
COMPONENTS.

EXCLUSIVE
MOUNTING
FEATURE
ENABLES YOU TO
MOUNT UNIT WITH
COMMON
NO. 4 SCREWS.



MAINTAINS
INITIAL CONTACT
CHARACTERISTICS
BEYOND 10,000
INSERTIONS.

VERTICAL AS WELL
AS HORIZONTAL
INTERCONNECTING
MATRICES.

CONNECT MORE
WIRE.
WIDER FAN-OUT
CAPABILITIES.

UNIQUE
DESIGN WILL
ACCOMMODATE
WIDE RANGE OF
WIRE OR
COMPONENT
LEADS, FROM
.015 TO .032
INCHES.

- **ACCEPTS ALL STANDARD COMPONENTS**
- **NO SOLDERING — JUST PLUG IN**
- **REQUIRES NO SPECIAL PATCH CORDS**
- **REUSEABLE**

El Instruments has created and produced the ultimate answer to

ea

T

ORDER FORM

Please RUSH the items checked below:

item no.	description	how many	price

☐ Check enclosed in the amount of \$ _____

☐ Our purchase order no. _____ is enclosed

Company _____

Address _____

City _____ State _____ Zip _____

Att. of _____

El Instruments has created and produced the ultimate answer to ease in breadboarding circuits.

The UNIVERSAL COMPONENT EL SOCKET[®]

Each EL SOCKET[®] is ready to use. No. 4 mounting screws are all that is needed. Can even be insulated for use on conducting or metal surfaces by using vinyl tape. You build your circuit by plugging the components (i.e., $\frac{1}{4}$ watt resistors, ceramic capacitors, diodes, transistors, I.C.'s, etc.) into the EL SOCKET[®]. The components are interconnected with any solid wire #22 gauge—#26 gauge. No special patch cords required.

Each terminal has five tie points: one point for component lead, three points for input and output wires, one point for test probe. New plug-in tie point contacts were developed for these breadboard strips to produce no-solder holding power and solid electrical contact. The resulting grip on inserted pins and leads is unequalled, exceeding conventional spring sockets. Contacts are spring loaded beryllium copper, heat-treated and nickel plated.

IF YOU ACT NOW AND ORDER BY RETURN MAIL, USING THE POSTAGE FREE ENVELOPE, YOU CAN GET QUICK DELIVERY OF THE VERSATILE EL SOCKET[®] FOR ONLY \$18.00 EACH.

Just fill out the order blank, enclose it with your check or purchase order in the attached postage-free envelope and send it to us by return mail.

ORDER FORM

Please RUSH the items checked below:

item no.	description	how many	price

☐ Check enclosed in the amount of \$ _____

☐ Our purchase order no. _____ is enclosed

Company _____

Address _____

City _____ State _____ Zip _____

Att. of _____

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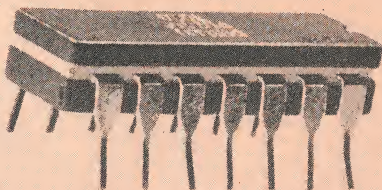


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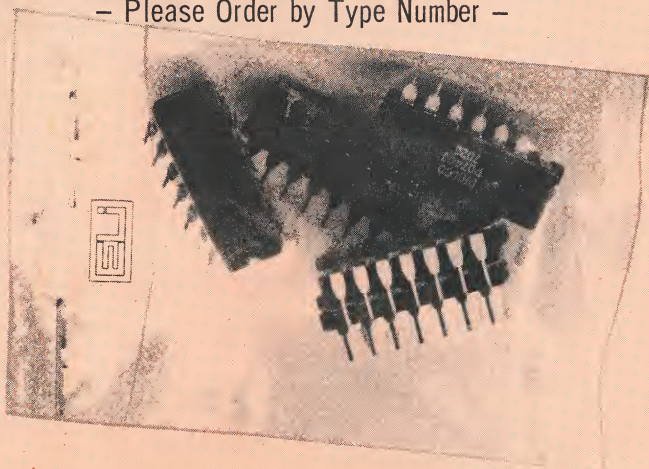


SUBSTANTIAL SAVINGS OVER BOOK PRICES on Semi Conductor Components



Each EL-pack contains either
3 or 5 components accompanied
by a diagram showing the
device configuration

TYPE	DESCRIPTION	PRICE
SN7400	T ² L Quad 2 input nand gate pkg. of 5	2.50
SN7420	T ² L Dual 4 input nand gate pkg. of 5	2.50
SN7490	T ² L Decade Counter pkg. of 3	10.00
SN7491	T ² L 8 Bit Shift Register pkg. of 3	10.00
SN7492	T ² L Divide by 12 Counter pkg. of 3	10.00
IC 741	Operational Amplifier pkg. of 5	10.00
- Please Order by Type Number -		



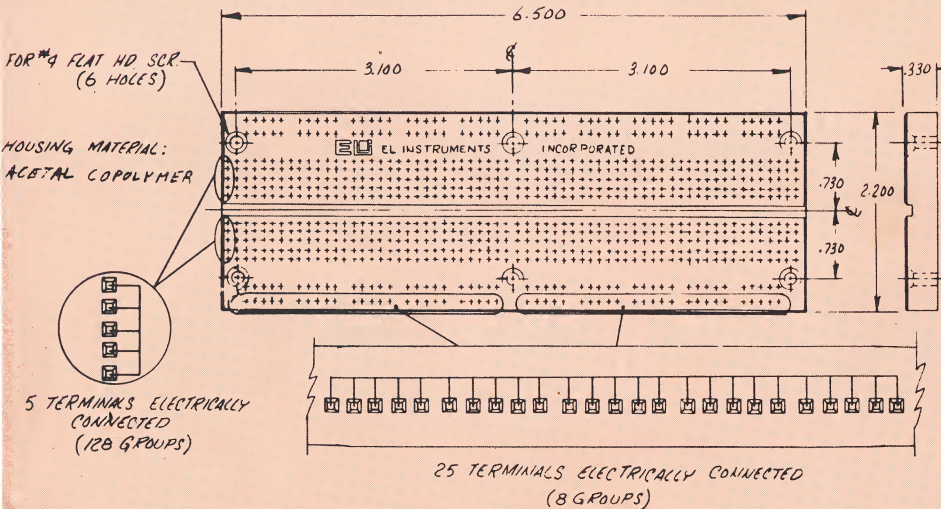
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POSTAGE PAID ENVELOPE AND SAVE!!!**



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DATA

EL SOCKET[®] SK #10